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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/827,390  
Filing Date: April 19, 2004  
Appellant(s): WOOD, LOWELL L.

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Mark Hennings  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 06/10/2010 appealing from the Office action mailed 10/29/2009.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The examiner has no comment on the status of claims contained in the brief.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

Applicant notes that the issue to be reviewed on appeal is whether Examiner has met the burden to show claims 9, 11-20, 28, 29 and 31 are rejected under 35 U.S.C. 103(a). However, it appears Applicant has substantively responded only to the rejection of dependent claims 15 and 16.

Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

6,385,472	HALL et al	5-2002
6936003	IDDAN	8-2005
2005/0027236	DOUK	2-2005

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 1-6, 8, 10, 21, 23-25, 27, 30, 32, 33-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Hall et al (U.S. Pat. 6,385,472 B1).**

Regarding claims 1-6, 8, 10, 21, 23-25, 27, 30, 32, 33-41, Hall discloses a system with a body portion (e.g., a body portion of a human, such as a circulatory system), an extending part with a proximal end piece and at least one distal end piece configured to telescopically extend from the proximal end piece; at least one receiving body; and a control circuit with a processor and stored software coupled to the receiving body (see Figs. 1 and 6; col. 3, lines 33-35; col. 5, lines 30-34) and suitable for controlling the system. The extending part comprises two or more distal pieces (see Fig. 1) and the distal end pieces are configured to slidably collapse within an interior of

the proximal end piece; the extending part comprises a decreasing size and/or dimension for traveling the interior of a blood vessel (see Fig. 1); and the extending part comprises a hollow portion (see Fig. 1); the size of one or more distal end pieces is less than a size of a proximal end piece (see Fig. 1); the system further comprises a motor (col. 7, lines 65-67); the system further comprises a source of a chemical (col. 2, lines 26-28) and is capable of dispensing fluid through a dispenser at the end of the device; or a functional tool (46) and a tool positioner, which is capable of ablation (col. 2, lines 25-27).

**Claim 7, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (U.S. Pat. 6,385,472 B1).**

Regarding claim 7, it is noted that Hall does not disclose a two-fold decrease in diameter of each of a successive hollow sliding part. It would have been obvious for one of ordinary skill in the art at the time of the invention to form the hollow sliding parts to have a two-fold decrease in diameter for each successive part, since such a modification would have involved a mere change in the size of a component which is recognized to be within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 22, it is noted that Hall does not disclose a source of two or more of a chemical, chemical compound or biological material. It would have been obvious for one of ordinary skill in the art at the time of the invention to provide a source of two or more of a chemical, chemical compound or biological material, since it has

been held that duplicating the essential working parts of an invention (e.g., the source of a chemical) involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claim 26, it is noted that Hall does not disclose a second control circuit. It would have been obvious for one of ordinary skill in the art at the time of the invention to provide a second control circuit, since it has been held that duplicating the essential working parts of an invention (e.g., a control circuit) involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

**Claims 9, 11-20, 28, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (U.S. Pat. 6,385,472 B1) in view of Iddan (U.S. Pat. 6,936,003 B2).**

Regarding claim 9, 28, 29, and 31, it is noted that Hall does not comprise a pump. Iddan discloses an extendable element in the analogous art to Hall, comprising a pump suitable for storage (see Fig. 1C) and a portion at the end of the extendable element for degrading a mass of cells and storing them. Iddan also teaches a portion for tissue welding (i.e., cauterizing), ablating and/or a stent (col. 3, line 62 to col. 4, line 25). It would have been obvious for one of ordinary skill in the art at the time of the invention to provide a tool for degrading cells and a pump for pumping the cells out of an animal, so as to analyze the stored samples to provide more personalized and accurate care for a patient. It would have been obvious to additionally provide an cauterizing or ablation tool, or a stent, since such tools and apparatuses are well known

for being attached to an extendable portion and would be useful for providing a wider variety of in vivo function or procedures.

Regarding claims 11-16, it is noted that Hall does not disclose a polymer operative for converting electrical energy into mechanical energy to move a fluid. Iddan teaches electroactive polymers suitable to convert electrical energy into mechanical energy so as to move a conduit containing a fluid receivable to a location. It would have been obvious for one of ordinary skill in the art at the time of the invention to implement the electroactive polymers of Iddan in the device of Hall so as to more accurately control a tractable conduit in a sensitive body orifice or vessel.

Regarding claims 17-20, it is noted that Hall does not disclose coupling a sensor or a wireless interface with a transmitter/controller to the system. Iddan teaches sensors (see Abstract) as well as wireless data receivers/transmitters (see Abstract) being attached to an extendable element. It would have been obvious for one of ordinary skill in the art at the time of the invention to outfit the device of Hall with sensors and/or wireless data receivers/transmitters as taught by Iddan, since sensors would be useful for providing enhanced feedback at the treatment site, and wireless systems would be useful for performing procedures and/or obtaining data at a remote site.

**Claim 100 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al (U.S. Pat. 6,385,472 B1) in view of Douk (U.S. Pub. 2005/0027236 A1).**

Regarding claim 100, it is noted that Hall does not disclose that the proximal end piece and one or more distal end pieces are configured to articulate at one or more joints of adjacent pieces. Douk discloses a telescoping catheter in the analogous art to Hall, where the joints of telescoping distal pieces are configured to articulate at one or more joints (see Figs. 1-3). It would have been obvious for one of ordinary skill in the art at the time of the invention to configure the proximal and distal end pieces to articulate at one or more joints so as to ensure that the distal pieces have a maximum configurable extension length suitable for a specific medical procedure.

#### **(10) Response to Argument**

**Applicant's first argument** (Appeal Brief, pages 30-52, regarding claim 15) is directed to the rejection under 35 U.S.C. 103(a) as being unpatentable over Hall et al (hereinafter "Hall") in view of Iddan.

Applicant argues, in multiple instances, that the applied references do not disclose or render obvious "providing a polymer coupled to the flexible finger operative for converting one form of energy to a new form of energy and moving fluid" (Appeal Brief, pg. 33). Examiner asserts that the subject matter over which Applicant argues is more specific than the limitations of the appealed claim (neither claim 15 nor even claim 1, from which claim 15 depends, requires a polymer coupled to a flexible finger). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).



Further, Applicant argues, in multiple instances, that the reference of Hall fails to teach the text of claim 15 (Appeal Brief, pg. 35). However, Examiner stated in the Office Action mailed 10/29/2009 (see pg. 5, lines 5-6) that Hall did not disclose the subject matter of claim 15 reciting a polymer that converts one form of energy to a new form of energy operative to move a fluid. The reference of Iddan was applied to teach the limitation set forth in claim 15. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Responding to Applicant's argument that Iddan fails to disclose a polymer that converts one form of energy into a new form of energy operative for moving a fluid, Examiner asserts: Iddan discloses elements, e.g., electroactive polymers within piezo elements, that convert electrical energy (i.e, positive and negative voltage) into mechanical energy (i.e., the movement of the electroactive polymers within the piezo elements) so as to effect controlled adjustment of the shape and motion of an extendable element. See col. 13, lines 8-27, lines 45-63; col. 13, line 67 to col. 14, line 24. Such adjustment would be capable of moving a conduit to deliver a fluid.

Responding to Applicant's argument that the reference of Iddan could not be reasonably combined with Hall to arrive at the claimed invention because the device of Hall would destroy the intended use of Hall to orient a conduit using magnets, Examiner asserts: the electroactive polymers of Iddan, if implemented in the reference of Hall would enhance, rather than destroy, the controlled movement of the device of Hall.

Either the magnetic elements in Hall could be replaced with the electroactive polymers of Iddan as functional equivalents thereof, or the electroactive polymers of Iddan could be added to the reference of Hall as a complement to the magnetic elements of Hall. Either modification would appear to enhance the controlled movement of the device of Hall.

**Applicant's second argument** (Appeal Brief, pages 53-75, regarding claim 16) is directed to the rejection under 35 U.S.C. 103(a) as being unpatentable over Hall et al (hereinafter "Hall") in view of Iddan.

Regarding Applicant's argument that Iddan fails to disclose providing a wave motion (as to claim 16), Examiner asserts: Iddan discloses that positive voltage can curve the piezo elements in one direction, and negative voltage can curve the piezo elements in the opposite direction. A repetitive motion may be applied as necessary to effect a wave-like, up-and-down motion to the piezo elements. Such motion would be capable of moving a conduit containing a fluid, since the general motion of the piezo elements is disclosed to move and control the conduit.

Applicant is additionally directed to Examiner's response to Applicant's first argument (see above).

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Scott J. Medway/

Examiner, AU 3763

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